PSYCHOLOGICAL FACTORS AS PREDICTORS OF INJURIES PREVALENCE IN VARSITY KABADDI AND KHO-KHO PLAYERS

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CHAPTER-1

INTRODUCTION

Origin of the research problem:

Recently, injuries have been described as the greatest source of stress, and single most important issue in sports. Injuries may lead to psychological problems such as anxiety, depression and unhealthy behaviours such as increased drug and alcohol abuse. These negative moods and behaviours contributed to the athlete at greater risk for injuries. Kabaddi and Kho-Kho games were played as traditional outdoor games in almost all regions and very much concerned about development of the physique and for the art of offense and defense. The game Kho-Kho and Kabaddi are very simple in nature, easy to organize, less expensive. Hence they are popular games played almost in all rural and urban region schools and colleges even today. Kabaddi and Kho-Kho are one of the most popular sports in the India. Kabaddi and Kho-Kho has been demonstrated to be among the most hazardous of organized team sports and injury is a frequent event in Kabaddi and Kho-Kho (Winter Griffith, 1989; Sinku 2006).Kabaddi and Kho-Kho requires a variety of physical attributes and specific playing skills, therefore participants need to train and prepare to meet at least a minimum set of physical, physiological and psychological requirements to cope with the demands of the game and to reduce the risk of injury. It is an enjoyable and social sport than can be played from childhood to old age, either at a recreational level or as a competitive level. Kabaddi and Kho-Kho playing largely involves starting, running, slopping, twisting, jumping, and turning movements that place the players to greater risk of injury (Waston 1993).In the epidemiological studies, injury occurs in training or matches interrupted or hampered play (Sinku 2006 and 2007). Special treatment required in order to continue the game, or if the injury has made playing impossible. Unfortunately, Kabaddi and Kho-Kho received a little interest in the sphere of sports medicine.

Kabaddi and Kho-Kho is a high risk sport dominated by overuse injuries while recovery time for injuries is relatively long, but only few working days are lost by the players to return back to play, thus leading to abuse of the injured sites. In football

only a few studies have been made in the literature regarding incidents of injury and pattern, possible risk factors and injury prevention (Winter Griffith, 1989; Wastan, 1993; Junge, 2004). In Kabaddi and Kho-Kho overuse injuries are the most frequent occurrences of injury and injuries are traditionally divided into contact and non-contact mechanism in which case contact injury are transmitted from the playing surface to the injured body part.

Keeping in view the paucity of information about sports injuries in general and Kabaddi and Kho-Kho playing in particular, an attempt has been made in this area to investigate the nature, location, causes, outcome of injuries and the possible risk factors involved among Kabaddi and Kho-Kho.The aim of the present study is to quantify the injuries prevalence in Kabaddi and Kho-Kho at various stages

Statement of the problem :

In the light of the above, the investigators become interested in determining the possible risk factors involved in Kabaddi and Kho-Kho injuries, mechanism of injuries and severity of injuries. The problem was stated as "**Psychological factors as predictors of injuries prevalence in varsity kabaddi and Kho-Kho players**" taken up to assess the level of familiarity of these subjects among Kabaddi and Kho-Kho players. It was further aimed to help the Sports Scientist and Administrators to enable them to for mutate a better procedure to minimize the incidence of injuries to Kabaddi and Kho-Kho players.

Objective of the study :

The primary purpose of the study is to determine psychological profiles of Kabaddi and Kho-Kho players, to document injury profiles, and to identify psychological predictors of injury occurrence in Kabaddi and Kho-Kho players with respect to Severity, Location, Period and the possible risk factors involve in injuries.

Specific objectives of the study:

The specific objectives of the study will assess the Mechanism, Causes, Incidence, and Nature of Kabaddi and Kho-Kho players injuries, together with the strategies commonly used by them in dealing with excessive stress

Significance of the Study:

1. The Study will help to know about the various causes of injuries.

2. It would facilitate the physical educationist, coaches, football expertise to provide appropriate training to know whether injury problem like strain, sprain, dislocation, fracture are related to the sports performance or not.
3. It will help the players, coaches, physical educators to take preventive measures to minimize the injuries.
4. This study may motivate other investigator to take up similar studies selecting more number of players. So that more information related to injury of Kabaddi and Kho-Kho players will be highlighted.

Research Questions :

1. How psychological factors can predict injury occurrence in Kabaddi and Kho-Kho players?

2. How excessive stressors contribute to Kabaddi and Kho-Kho injuries ?

3. What are the risk factors involved in Kabaddi and Kho-Kho injuries?

4. What is the relation between different field position and Kabaddi and Kho-Kho Injuries?

Hypothesis :

1. There will be Psychological factors can predict occurrence of injury in Kabaddi and Kho-Kho players
2. There will be excessive stress can contribute occurrence of injuries in Kabaddi and Kho-Kho players.
3. Occurrence of Football injuries will significantly effects on the participation in Kabaddi and Kho-Kho players.

Delimitations of the study :

1. The present study was delimited to only Kabaddi and Kho-Kho players.
2. The study was delimited to the football players of 18-28 years of age.
3. The study was delimited to injuries sustained due to Kabaddi and Kho-Kho one year of period

Limitations of the study :

1. Since the Kabaddi and Kho-Kho players belonged to different training back ground this may be considered as the limitation of the study.

2. The availability of the sophisticated instrument which may effects the results may also be considered as the limitation of the study.

3. Since the Kabaddi and Kho-Kho players belonged to different level of performance, hence the prior experience of the players may be considered as a limitation of the study.

Definition and Explanation of Important Technical Terms :

Kabaddi and Kho-Kho Injuries :

Any physical complaint of Kabaddi and Kho-Kho during match playing and training period

Sprain :

A Sprain is an injury involving a ligament, Ligament are basically inelastic and designed to prevent abnormal motion of a joint whenever a joint is forced to move in an abnormal directions ligaments are stressed some of the common sprain in Kabaddi and Kho-Kho are :

Muscle Cramp:

"They are painful, sustained contraction of all the fiber in a muscle. They can lost for just a few seconds or continue for several hours " cramp occurs most frequently under competitive playing conditions. Increase heat, high humidity fluid loss, fatigue and tension all are contributory factors. A player having a previous history of muscle cramp is more likely to in fine floe again. Losses of salt, potassium, Magnesia, and even zinc have been postulated etiologic factors. However the exact cause is not known.

Muscle Pull:

It is an acute tear of skeletal muscle fiber and is characterized by sudden localized and persistent pain in a muscle, e.g. horse rider on inner thigh. Muscle pull resulting from lack of proper warm up before physical activity, poor flexibility, over training, lack of co-ordination of activity. Poor training and imbalance in muscular strength between agonistic and antagonistic muscle particularly two joint it also occurs most frequently under competitive and training conditions.

Fractures :

An interruption in the continuity of the bone which may be a complete break is an incomplete break or minor crack.

Dislocation:

Dislocation of the joint occurs when the articular surfaces are completely separated from each other so that all subluxation occurs when the articular surfaces are partially separated but there is still some part of each surface in contact. The main cause of either dislocation or subluxations is trauma. Congenital malformation of the joint surface can occur and this could result in dislocation, as for example in a congenital dislocation of the hip.

Soft Tissue Injuries :

Soft Tissue injuries comprises damage to ligaments, muscles, tendons with synovial sheaths, fascia, and inter articular cartilage.

Injuries to Ligaments :

Sprain, Strain and Rupture are terms used to denote injuries. Acute sprain of the ligament is caused by a sudden twisting or wrenching of a joint which results in overstretching of the ligament. It is associated with the muscle controlling the joint being momentarily off guard so that the ligament is subjected to the full force of the movement. Only some of the fabrics are reputed, the severity of the injury. The joint remains stable but the quality of stability depends on the number of fibers remaining intact. Chronic sprain of a ligament is caused by repetitive stretching from a minor force which may be due to bad postural habit or poor quality of movement. Strain may be used as term in the diagnosis of partially ruptured ligaments but is more commonly applied to muscle and tendon injuries. Complete rupture is disruption of all fibers of the ligament caused by a sudden, violent force such that the joint is

Tendon Injuries :

Tendons are strong structures which connect muscle to bones. Some tendons are enclosed in a synovial sheath. Tendons that do not have a synovial sheath slide smoothly within a compartment at deep fascia. The main cause of tendon injuries may be traumatic. i.e. Direct cuts, Sudden stretch. These injuries may be partial or complete to the football players.

CHAPTER II

REVIEW OF RELATED LITERATURE

The review of the literature for this study focuses on procedures used indentify the incidence, occurrence causes and prevalence of sports injuries. The review focuses on a number of different instruments used to identify injuries and it nature.

The review of related literature is instrumental in the selection of topic, formulation of hypothesis and deductive reasoning to the problem. It helps to get a clear idea and supports the findings with regard to the problem under study. The literature in any forms the foundation upon which all future work will be built. "The review of literature is generally used as a basis for inductive reasoning for locating and synthesizing all the relevant literature on particular topic". The research scholar has gone through the available related literature, which are relevant to the present study and have been presented in sports related injuries.

The following review has been selected by the investigator :

Prabhu and Kishor (2014) indicated that injuries are very common among the Kho-Kho and kabaddi players. The incidence of injury in kabaddi is highly notable than in Kho-Kho. It may be happen because Kabaddi is most aggressive and heavy contact game, were as Kho-Kho is a semi contact game. Most of the injuries were accrued with contact with the player and contact with the hard/uneven ground. For bone and joint injuries treated immediately after the injuries accrued. Severity of injuries among Kabaddi players was more when compared to Kho-Kho players. It was concluded that players and coaches should be made more aware of the importance of protective

equipment in helping to prevent injury or re-injury and effective emergency care of injuries by using rest, ice, compression and elevation.

Sinku S.K. et.al (2008) investigated the football injuries in relation to field position in competitive football players and to determine the nature, location, causes outcome of injuries and the possible risk factors involved. A total of 98 out of 128 football players sustained injuries in relation to field position. 108 injuries were recorded of which 27% were reoccurring injuries. Lower limb injuries predominated; the ankle and knee being the most commonly injured anatomical site. A significant proportion of injuries occurred in the upper limb region. A high number of injuries occurred to the goal keeper, and where mainly related to the thumps. Most injuries were of soft tissue in nature and related to muscle, ligament and tendon. Most common situations giving rise to injuries were collision (27.77%), twist/turn (22.22%) and stumble (17.59%). Lower limb injuries was found to be predominated, muscle injuries being the most common type, collision is common cause of injuries.

Soderman et.al.(2001) The following possible risk factors for leg injuries in female soccer players were studied: age, anatomical alignment, generalized joint laxity, thigh muscle torque, muscle flexibility, ligamentous laxity of the knee and ankle joints, recent injuries, and duration of soccer exposure. A total of 146 players from 13 teams in the second and third Swedish divisions underwent clinical examination, isokinetic measurements of quadriceps and hamstring torques, and testing of postural sway of the legs. All soccer-related leg injuries resulting in absence from at least one scheduled practice session or game were recorded during one outdoor season (April-October). In 50 players there were 61 traumatic injuries, and 17 players sustained 19 overuse injuries. The overall injury incidence rate (traumatic and overuse) was 5.49/1000 h of soccer. Variables significantly increasing the risk of traumatic leg injuries included generalized joint laxity, low postural sway of the legs, hyperextension of the knee joint, and a low hamstring-to-quadriceps ratio during concentric action. Multivariate logistic regression showed hyperextension of the knee joint, a low postural sway, reduced H/Q ratio during concentric action, and a higher exposure to soccer to significantly increase the risk of traumatic leg injury. All five players who suffered an anterior cruciate ligament injury during the study period had a lower hamstring-to-quadriceps ratio during concentric action on the injured side than on their non injured side.

Peterson et.al.(2000) studies the incidence of football injuries and complaints as related to different age groups and skill levels was studied over the period of 1 year. A total of 264 players of different age groups and skill levels were observed for 1 year. Five hundred fifty-eight injuries were documented. Two hundred sixteen players had one or more injuries. Only 48 players (18%) had no injury. The average number of injuries per player per year was 2.1. Injuries were classified as mild (52%), moderate (33%), or severe (15%). Almost 50% of all injuries were contact injuries; half of all the contact injuries were associated with foul play. The majority of injuries were strains and sprains involving the ankle, knee, and lumbar spine. Nearly all players (91%) suffered from complaints related to football. Only 23 players reported no injuries and no complaints. Prevention programs, fair play, and continuing education in techniques and skills may reduce the incidence of injuries over time.

Cromwell, f. j. Walsh.Gromely (2000) in a six month period by the means of a questionnaire on elite gaelic footballers investigated that ninety five injuries were recorded giving an incidence rate of 1.78 injuries per subject per year, of which 35% of injuries were sustained during training session. A total 88 out at 107 subject sustained injuries over the study period. Lower extremities injuries predominated (77%), the ankle being the most commonly anatomic site. Most injuries were soft tissue in nature; muscle, 33% Ligament 32%, tendon, 16%. The most common situations giving rise to injuries were collisions (22%) and twist turn (19%) foul play only accounted for about 6% of injuries.

Hawkins et.a; (2001) suggested that muscular strains are the single most commonly reported injuries in English professional soccer. This data is consistent with previous research, which reported similar findings. (Howkins and fuller, 1999; Lewin, 1989, Ekstrand and Gillguist, 1983, 1983 b.). This epidemiological research (Studies of the incidence of injury) sought to identify the cause of occupational injury of professional soccer players and served as the exploratory level of research on the nature of soccer injuries. Further research has been attempted to investigated the relationship between extrinsic and intrinsic factors and the incidence of muscular injury, particularly hamstring muscle injury (Orchard et. al. 1997; Orchard 2001).

John Orchard (2000) surveyed Groin injuries are the second most frequent injury category in Australian football league, with an incidence of 4:6 injuries per 1000 player per week. They appear to be common at all clubs due to the demands of the game and despite the best preventive efforts of team medical and fitness staff specific diagnosis within the category of groin injuries is controversial "SPORTS" hernias, adductor tendonopathy, osteitis, public obturator nerve entrapment and nonspecific terms, such as groin strain and publgia, are diagnosed to varying degrees by different team physicians.

Lewin (1990) reporting injuries sustained at Arsenal football club state. One aspect not covered in this survey was the relevance of players position to the incidence of injury. This study examines the type of injuries in Amateur football players. Prosecuting to the accident and emergency department of king's college hospital in relation to the position at the field.

Chomiaket.al..(2000) were to analyze factors related to the occurrence of severe football injuries in players of different ages (14 to 42 years) and different skill levels (local teams to first league teams). In the Czech Republic, 398 players were followed up for 1 year, during which time they sustained 686 injuries. Of these, 113 (16.5%) were severe injuries. Ninety-seven severe injuries (86%) were able to be documented in detail. Trauma was the cause of 81.5% of the injuries and overuse was the cause of 18.5%. Joint sprains predominated (30%), followed by fractures (16%), muscle strains (15%), ligament ruptures (12%), meniscal tears and contusions (8%), and other injuries. Injuries to the knee were most prevalent (29%), followed by injuries to the ankle (19%) and spine (9%). More injuries occurred during games (59%) than in practice. Twenty-four percent of the injured players had suffered a previous injury of the same body part. Forty-six percent of injuries were caused by contact and 54% involved no body contact. Thirty-one percent of severe injuries were caused by foul play.

Fuller, et. al (2004) studied to understand how tackling leads to injury in football, to develop a framework for classifying tackles and to plentify tackles with the greatest propensity to cause injury. Video recordings of 123 matches in three FIFA Tournaments were used to indentify tackling parameters. Team physicians prepared report of post match medical attention to players. tackle from the side were twice as

likely to require post match medical attention as tackle from behind. Injuries to the head/neck of tackled and tackling players and the torso of tackling players were more like to receive on pitch, medical attention than other injuries. Injuries to the foot for tackled and tackling players and the lower leg and high for tackling players were less likely to receive on pitch medical attention than other injuries. Tackles with the greatest propensity for causing injuries involved dash of heads and two footed tackles for tackled players and dash of heads, two footed tackles, jumping vertically and tackles from the side for tackling players.

CHAPTER-III

METHODOLOGY:

METHODOLOGY:-

Under this section explained the methodological details used to implement the study. Specifically, presented here are the general perspective and context of the study, an overview of the participants, and description of the procedures used in data collection, and an explanation of data analysis.

Pilot Study :

A pilot study will be conducted immediately after the approval of this research, prior to the commencement of the main study. The purposeof the pilot study is to test the feasibility and logistical aspects of the proposed main study in particular the submission of detailed injury occurrence data and player activity data

Demographic Information:

The data was collected through respondents in the form of different descriptive tests. The demographic information about, age, height, weight etc. was obtained before seeking responses.

Target population:

The present study determines the injuries to Kabaddi and Kho-Kho players. The Target Population of the study will be Kabaddi and Kho-Kho players at varsity level.

Research Design:

The design in a research study refers to "the researcher's overall plan for answeringthe researcher's question or testing the research hypotheses" . This study involves a cross sectional, comparative survey of three groups of Kabaddi and Kho-Kho players in a non-experimental, retrospective design. Retrospective studies usually employ some form of questionnaire and ask subjects to recall injuries that occurred over a particular period.This explore and measure the injuries prevalence in Kabaddi and Kho-Kho players. This study aims to compare the Injuries betweenKabaddi and Kho-Kho who are playing in the same game and may inform policies and practices designed to reduce injuries and enhance performance.

Ethical Consideration :

In collecting the data, the researcher Follow to ethical guidelines, principles, and standards for studies conducted with human beings. The expert Committee of University grants commission has approved the study prior to its implementation. The study included safeguards for protecting humans, which involved three major ethical principles: beneficence, respect for human dignity, and human justice. Beneficence is the protection of participants from physical and psychological harm, exploitation, and

performance of some good. The risk/benefit ratio of participation weighs the risk to participants against potential benefits to society. Beneficence implies maximizing benefits over risks. Participants in this study may have developed greater personal awareness of their injury and its ill effects on performance and health. The risks were considered minimal and there were no known physical discomforts during or after participation. There was slight risk of a breach of confidentiality due to the link between participants' responses and their identity. Participation in this study was strictly voluntary. The investigator wish to participants that their data is confidential and never use for any purpose.

Inclusion and exclusion criteria:

The inclusion and exclusion criteria for participants were as follows

The inclusion criteria are:

1. The participant was agreeing to participate in the study

2. The participants must be competitive Kabaddi and Kho-Kho players in their aged range was 18 to 28 years.

3. The participants were not rotating through other health facility at the time of study.

The exclusion criteria are:

1. The participants advised not to participate if under any serious psychological disorders.

2. Inability to obtain the questionnaire of the respondent.

3. Presence of chronic medical conditions such as asthma, heart disease or any other condition. And

4. Participants not less than aged of 18 and more than 28 years.

Administration of the test:-

Some questionnaires were distributed to Kabaddi and Kho-Kho players personally and some cases contacting footballers at the venue of State, University, and National tournament held at different places. Instructions were given to the footballers before filling these questionnaires by the researcher, football coach and football experts.

Tools of the Study:-

For the present study, modified questionnaires prepared by Cromwell, F.J. Walsh Gromely (2000) for Elite Gaelic footballers was utilized after the modification of these questionnaires and the test -retest reliability was found out 0.94 by the researcher. The questionnaires were divided by two sections. A and B part consisted of questions of the personal and physical characteristics of the players, including details of age, weight, and height training duration, weekly training , warm up period, no. of completion in one year, any sporting activity other than football participated more than two hours in a week, feeling before completion and feeling before practice etc. The level of commitment to footballers was as curtained by (a) A question examining players participation in other sports, for more than two hours a week to assess the proportion of players. (b) Questions examining exposure to training in terms of the number and training sessions. Other areas investigated including the duration of warm-up, whether protective equipment was worn, and the strong leg used to kick the ball. Number of competition, feeling before training and competition were takes into view. Finally, the subject was asked to indicate according to Yes/No choice (except question ... 8) Whether an injury or injuries have been sustained as a result to three groups of competitive footballers within one years. This final question in part A was structured as a filter-type approach, meaning that no further details were required from the subject if the answer was no to the above question. If the subject responded yes, he was required to complete the accompanying part B of the questionnaires.In part B, respondents were asked to supply information about the

location timing, causes and nature of injuries. Further information was sought about whether the injury occurred during training or competitive matches and whether the condition of the ground contributed to the injury, whether the injury was reoccurring once was also ascertained. Finally, the consequences of the injury were investigated with regard to absenteeism from training or competition, the medical personal, if any, involved in treating the injury, and whether the injured player required hospital admission and players play at which position. The subjects were required to fill out a questionnaire for each injury for one year.

Worry Scale

The modified Worry Scale (Dunn and Syrotuik, 2003) will be used to measure an athlete's competitive worry. The test consists of 16 items, classified into 4 subscales. The subscales are "fear of negative social evaluation," "fear of failure," "fear of injury or physical danger," and "fear of the unknown." Questions are answered on a 5-point Likert scale, ranging from 1 ("not very like me") to 5 ("very like me"). Cronbach alphas ranged from 0.76 to 0.

Life Events Survey for Athletes.

LESA (Petrie, 1992) will be used to measure an athlete's life history stressors. The test comprises a list of 69 events. Footballers will ask to indicate which position they have experienced in the previous 12 months, and then for each event, to rate the experience of the stressors, on an 8- point Likert scale, with the range -4 ("extremely negative") to +4 (extremely positive). The outcome of the test is divided into three categories, negative life-event stress, positive life-event stress and total life-event stress. Test retest reliabilities for the two scales ranged from .76 to .84.

Collection of data:-

Data was collected individually through a questionnaire from 250 Kabaddi and 250 Kho-Kho players of different University separately, investigator contacting footballers personally and some cases at the venue of the different tournaments.

Statistical technique:-

Statistical techniques play very significant role in the interpretation of numerical data obtained from individuals by giving numerical expressions to the relationships and the

variations with respect to different aspects. Keeping in view the aim of the study, following statistical tools have used for interpretation of the data (Garett, 1981). The statistical computation of data of the present study is used by using SPSS package in the computer.

Tentative Chapterization:

The present study will be divided in the following chapters:

Chapter – I (Introduction)

The Chapter-1 outlines the background of the problem under consideration, its significance in the present scenario, the scope of the study, objectives the research intends to achieve and hypotheses to be established. This chapters also includes the definition and explanation of important technical terms related to the study.

Chapter – II (Review of related Literature)

The Chapter-2 undertakes the review of literature related to the present topic of study and tries to define the problem under consideration in a proper way. Firstly, the chapter defines important terms and concepts in a proper way to give readers an understanding of various terms in the research report. Secondly, it critically reviews the gender-based violence. The chapter identifies the research gaps between the problem under consideration and the available literature on the issues and strongly recommends further exploration on the problem.

Chapter – III (Methodology)

This includes a detailed methodology of conducting research on the issue under consideration and various components of research design such as the universe, the sample, types of data, tools of data collection, technique of data collection, ethical consideration and methods use to analyse data.

Chapter – IV(Interpretation of data and results of the study)

The Chapter includes the interpretation of data and results of the study. The results of the study will be illustrated through suitable table and figure. This chapter will also include the discussion of findings.

Chapter – V (Summary Conclusion and Recommendation)

The Chapter five summarizes the findings of the study and conclusions derived thereof. The research has also made some valuable suggestions for further research

Time frame

1st Year	Time frame for different components
	Reference & Literature Collection
	Permission letters send to the clubs and organizations
	Preparation of study materials
	Preliminary Survey
	Pilot study
	Submission of Progress Report
	Detail Survey
	Data Collection, from players, and discussion with coaches (6 Months)
2nd-3 rdYear	Data Collection, from players, and discussion with coaches(6 months)
	Compilation of data
	Screening and Coding of the questionnaires
	Fragment of questionnaire according to sampling frame
	Preparation of Research Paper
	Use of SPSS Software
	Preparation of Graphs
	Data Interpretation
	Final Compilation of Data
	Preparation of Research Paper & Communicating it for Publication
	Report Writing
	Submission of Final Report

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